```
Your SELECT statement is:
    s ((computer?()(aided or assisted or simulat?))(3n)(noise()reduc?)) not
py>2000

          Items    File
          -----    ----
               6       2: INSPEC_1969-2005/Dec W3
              47       6: NTIS_1964-2005/Jan W1
               7       8: Ei Compendex(R)_1970-2005/Dec W4
               3      15: ABI/Inform(R)_1971-2005/Jan 08
               1      16: Gale Group PROMT(R)_1990-2005/Jan 10
               1      20: Dialog Global Reporter_1997-2005/Jan 09
               6      34: SciSearch(R) Cited Ref Sci_1990-2005/Jan W1
               1      35: Dissertation Abs Online_1861-2004/Dec
               1      36: MetalBase_1965-20050105
               4      62: SPIN(R)_1975-2005/Oct W5
               5      63: Transport Res(TRIS)_1970-2005/
              13      73: EMBASE_1974-2005/Jan W1
      Examined  50 files
               2      81: MIRA - Motor Industry Research_2001-2004/Nov
               1      88: Gale Group Business A.R.T.S._1976-2005/Jan 06
               2      94: JICST-EPlus_1985-2005/Dec W1
              10      95: TEME-Technology & Management_1989-2004/Jun W1
               1      96: FLUIDEX_1972-2004/Dec
               1      99: Wilson Appl. Sci & Tech Abs_1983-2004/Nov
               1     103: Energy SciTec_1974-2004/Dec B2
               9     104: AeroBase_1999-2005/Jan
>>>File 115: Prefix "PY" is undefined
               1     115: Research Centers & Services_1994-2004/OCT
      Examined 100 files
              33     144: Pascal_1973-2004/Dec W1
               2     148: Gale Group Trade & Industry DB_1976-2005/Jan 10
               1     155: MEDLINE(R)_1951-2005/Dec W3
               2     206: ONTAP(R) NTIS_
               1     208: ONTAP(R) Ei Compendex(R)_
      Examined 150 files
               1     240: PAPERCHEM_1967-2004/Dec W4
      Examined 200 files
               2     315: ChemEng & Biotec Abs_1970-2004/Dec
               2     323: RAPRA Rubber & Plastics_1972-2004/Dec
      Examined 250 files
               7     440: Current Contents Search(R)_1990-2005/Jan 07
      Examined 300 files
               2     484: Periodical Abs Plustext_1986-2005/Jan W1
      Examined 350 files
      Examined 400 files
>>>I/O error in file 606
               2     610: Business Wire_1999-2005/Jan 09
>>>I/O error in file 619
               1     621: Gale Group New Prod.Annou.(R)_1985-2005/Jan 10
               1     649: Gale Group Newswire ASAP(TM)_2005/Jan 03
      Examined 450 files
      Examined 500 files
>>>I/O error in file 781
      Examined 550 files
Processing
```

```
Your SELECT statement is:
   s SoundPLAN and (wall()design)

          Items    File
          -----    ----
      Examined  50 files
      Examined 100 files
      Examined 150 files
      Examined 200 files
      Examined 250 files
      Examined 300 files
      Examined 350 files
      Examined 400 files
      Examined 450 files
      Examined 500 files
>>>I/O error in file 781
      Examined 550 files
          1    991: NewsRoom 2004 Jan 1-2004/Sep 30

   1 file has one or more items; file list includes 562 files.
   One or more terms were invalid in one file.
```

```
Your SELECT statement is:
    s (SoundPLAN and (Braunstein or Berndt))

            Items    File
            -----    ----
               1      15: ABI/Inform(R)_1971-2005/Jan 08
       Examined  50 files
               1      96: FLUIDEX_1972-2004/Dec
       Examined 100 files
       Examined 150 files
               1     225: DIALOG(R):Domain Names  1997 - Sep. 2004
       Examined 200 files
       Examined 250 files
       Examined 300 files
       Examined 350 files
       Examined 400 files
       Examined 450 files
       Examined 500 files
>>>I/O error in file 781
       Examined 550 files

    3 files have one or more items; file list includes 562 files.
    One or more terms were invalid in one file.
```

```
Your SELECT statement is:
    s ((enter? or input? or specif??? or indicate? ?)(5n)(desired or
required)(3n)(level? ?)(2n)noise) and ((recommend? or suggest? or output?
or calculat? or estimat?)(3n)(parameter? ? or solution? ? or dimension? ?
or thickness?))

          Items    File
          -----    ----
              1     16: Gale Group PROMT(R)_1990-2005/Jan 10
     Examined  50 files
              1     88: Gale Group Business A.R.T.S._1976-2005/Jan 06
     Examined 100 files
              2    148: Gale Group Trade & Industry DB_1976-2005/Jan 10
              2    180: Federal Register_1985-2005/Jan 07
     Examined 150 files
     Examined 200 files
Processing
              5    348: EUROPEAN PATENTS_1978-2005/Jan W01
Processing
>>>File 349 processing for ENTER? stopped .at ENTEROKMIASE
              9    349: PCT FULLTEXT_1979-2002/UB=20050106,UT=20041230
     Examined 250 files
     Examined 300 files
     Examined 350 files
     Examined 400 files
>>>I/O error in file 619
Processing
Processing
Processing
Processing
             24    654: US Pat.Full._1976-2005/Jan 06
     Examined 450 files
     Examined 500 files
>>>I/O error in file 781
     Examined 550 files

    7 files have one or more items; file list includes 562 files.
    One or more terms were invalid in 6 files.
```

```
Set      Items   Description
S1          44    ((ENTER? OR INPUT? OR SPECIF??? OR INDICATE? ?)(5N)(DESIRED
                  OR REQUIRED)(3N)(LEVEL? ?)(2N)NOISE) AND ((RECOMMEND? OR SUG-
                  GEST? OR OUTPUT? OR CALCULAT? OR ESTIMAT?)(3N)(PARAMETER? ? OR
                  SOLUTION? ? OR DIMENSION? ? OR THICKNESS?))
S2          42    RD (unique items)
S3          25    S2 NOT PY>2000
File   16:Gale Group PROMT(R) 1990-2005/Jan 10
          (c) 2005 The Gale Group
File   88:Gale Group Business A.R.T.S. 1976-2005/Jan 06
          (c) 2005 The Gale Group
File  148:Gale Group Trade & Industry DB 1976-2005/Jan 10
          (c)2005 The Gale Group
File  180:Federal Register 1985-2005/Jan 07
          (c) 2005 format only The DIALOG Corp
File  348:EUROPEAN PATENTS 1978-2005/Jan W01
          (c) 2005 European Patent Office
File  349:PCT FULLTEXT 1979-2002/UB=20050106,UT=20041230
          (c) 2005 WIPO/Univentio
File  654:US Pat.Full. 1976-2005/Jan 06
          (c) Format only 2005 The Dialog Corp.
?
```

```
s ((computer?(5n)simulat?(5n)acoustic?) and (noise(2n)reduc?)) not
py>2000

            Items    File
            -----    ----
                5       2: INSPEC_1969-2005/Dec W3
               23       6: NTIS_1964-2005/Jan W1
               94       8: Ei Compendex(R)_1970-2005/Dec W4
                1      15: ABI/Inform(R)_1971-2005/Jan 08
                1      34: SciSearch(R) Cited Ref Sci_1990-2005/Jan W1
                3      35: Dissertation Abs Online_1861-2004/Dec
                3      47: Gale Group Magazine DB(TM)_1959-2005/Jan 10
                3      62: SPIN(R)_1975-2005/Oct W5
                2      63: Transport Res(TRIS)_1970-2005/
                4      73: EMBASE_1974-2005/Jan W1
        Examined  50 files
                1      81: MIRA - Motor Industry Research_2001-2004/Nov
>>>File 85: Prefix "PY" is undefined
                1      85: Grants_2005/Jan
                3      88: Gale Group Business A.R.T.S._1976-2005/Jan 06
                3      94: JICST-EPlus_1985-2005/Dec W1
               41      95: TEME-Technology & Management_1989-2004/Jun W1
                1      96: FLUIDEX_1972-2004/Dec
                1     103: Energy SciTec_1974-2004/Dec B2
>>>File 115: Prefix "PY" is undefined
                1     115: Research Centers & Services_1994-2004/OCT
                1     141: Readers Guide_1983-2004/Sep
        Examined 100 files
               12     144: Pascal_1973-2004/Dec W1
                2     148: Gale Group Trade & Industry DB_1976-2005/Jan 10
                1     155: MEDLINE(R)_1951-2005/Dec W3
                1     208: ONTAP(R) Ei Compendex(R)_
       ·Examined 150 files
        Examined 200 files
                2     323: RAPRA Rubber & Plastics_1972-2004/Dec
>>>File 348 processing for COMPUTER? stopped at COMPUTER40
                4     348: EUROPEAN PATENTS_1978-2005/Jan W01
>>>File 349 processing for COMPUTER? stopped at
        COMPUTERTOMOGRAPHIEEINRICHTUNGEN
>>>File 349 processing for REDUC? stopped at
        REDUCTIONOFTHENUMBEROFSTOREDSTATESBYPR
                2     349: PCT FULLTEXT_1979-2002/UB=20050106,UT=20041230
        Examined 250 files
                1     440: Current Contents Search(R)_1990-2005/Jan 07
        Examined 300 files
                3     484: Periodical Abs Plustext_1986-2005/Jan W1
        Examined 350 files
        Examined 400 files
>>>I/O error in file 619
               10     654: US Pat.Full._1976-2005/Jan 06
        Examined 450 files
        Examined 500 files
>>>I/O error in file 781
        Examined 550 files
```

```
Set      Items     Description
S1        214     ((COMPUTER?(5N)SIMULAT?(5N)ACOUSTIC?) AND (NOISE(2N)REDUC?-
                  )) NOT PY>2000
S2        188     RD (unique items)
S3         16     S2 AND (ROOM OR ROOMS OR BUILDING? ? OR OFFICE? ?)  ~kurc.
File    2:INSPEC 1969-2005/Dec W3
          (c) 2005 Institution of Electrical Engineers
File    6:NTIS 1964-2005/Jan W1
          (c) 2005 NTIS, Intl Cpyrght All Rights Res
File    8:Ei Compendex(R) 1970-2005/Dec W4
          (c) 2005 Elsevier Eng.  Info. Inc.
File   15:ABI/Inform(R) 1971-2005/Jan 08
          (c) 2005 ProQuest Info&Learning
File   34:SciSearch(R) Cited Ref Sci 1990-2005/Jan W1
          (c) 2005 Inst for Sci Info
File   35:Dissertation Abs Online 1861-2004/Dec
          (c) 2004 ProQuest Info&Learning
File   47:Gale Group Magazine DB(TM) 1959-2005/Jan 10
          (c) 2005 The Gale group
File   62:SPIN(R) 1975-2005/Oct W5
          (c).2005 American Institute of Physics
File   63:Transport Res(TRIS) 1970-2005/
          (c) fmt only 2005 Dialog Corp.
File   73:EMBASE 1974-2005/Jan W1
          (c) 2005 Elsevier Science B.V.
File   81:MIRA - Motor Industry Research 2001-2004/Nov
           (c) 2004 MIRA Ltd.
File   85:Grants 2005/Jan
          (c) 2005 ORYX Press
File   88:Gale Group Business A.R.T.S. 1976-2005/Jan 06
          (c) 2005 The Gale Group
File   94:JICST-EPlus 1985-2005/Dec W1
          (c)2005 Japan Science and Tech Corp(JST)
File   95:TEME-Technology & Management 1989-2004/Jun W1
          (c) 2004 FIZ TECHNIK
File   96:FLUIDEX 1972-2004/Dec
          (c) 2004 Elsevier Science Ltd.
File  103:Energy SciTec 1974-2004/Dec B2
          (c) 2005 Contains copyrighted material
File  115:Research Centers & Services 1994-2004/OCT
          (c) 2004 Gale Research Inc.
File  141:Readers Guide 1983-2004/Sep
          (c) 2004 The HW Wilson Co
File  144:Pascal 1973-2004/Dec W1
          (c) 2004 INIST/CNRS
File  148:Gale Group Trade & Industry DB 1976-2005/Jan 10
          (c)2005 The Gale Group
File  155:MEDLINE(R) 1951-2005/Dec W3
          (c) format only 2005 The Dialog Corp.
File  208:ONTAP(R) Ei Compendex(R)
          (c) 1997 Elsevier Eng. Info. Inc.
File  323:RAPRA Rubber & Plastics 1972-2004/Dec
           (c) 2004 RAPRA Technology Ltd
File  440:Current Contents Search(R) 1990-2005/Jan 07
          (c) 2005 Inst for Sci Info
File  484:Periodical Abs Plustext 1986-2005/Jan W1
          (c) 2005 ProQuest
```

Description:

CARA (**C**omputer **A**ided **R**oom **A**coustics) is a very advanced computer program for computing and optimizing **Room Acoustics** of arbitrary rooms. CARA is based on the sound source imaging method in combination with a back tracing procedure.

CARA analyzes and improves room acoustic influenced sound coloration in a two step procedure:

- determination of the basic acoustic properties of the room (**Acoustic Ambiance**) in combination with suggestions regarding the furnishings (wall materials, furniture) in order to linearize the reverberation time spectrum,
- automatic **Positional Optimization** for the loudspeakers and the listener to minimize sound wave interferences (standing waves) in the listening area.

For a detailed analysis CARA calculates the total **sound field data** at 1,000-3,000 equally distributed grid points in the room. The evaluation of the sound field data concerns the modal structure (steady state sound pressure distribution), the room response of a Dirac-Pulse excitation in the time domain, the distribution of sound coloration, the sound imaging (stereophonic sound localization), and the speech intelligibility.

CARA provides the expert with a great number of room acoustic reference numbers (frequency dependent reverberation times, sound coloration, speech intelligibility, lateral sound level, or stereophonic sound localization) derived from **sound pressure frequency responses** or **transient room responses/reverberation diagrams**.

The special function **Auralization** renders a listening test in the (virtual) room to evaluate for example sound differences due to different loudspeaker positionings. Any piece of music (two channels Stereo) may be used for this.

CARA is structured into three functional blocks
(italic and underlined = new functions in CARA 2.1/2.2 PLUS)

1. **Room Design**
2. Room Acoustic **Calculations**
3. **Presentation of Results** (2D and 3D Diagrams)

Room Design:

- arbitrary floor plans (L-rooms, coupled rooms, ...), maximum size 100 x 100 m, *the wizard "New Room Design" offers a number of predefined floor plan templates (all dimensions may also be entered in non-metric units like inches or feet)*
- inside walls as partitions, columns, false ceilings, ceiling beams, as well as sloped ceilings and oblique floors (attic apartments, cinemas)
- furniture database (tables, cupboards, armchairs, etc.), or customize your furniture of several so-called 3D-objects
- additional sound absorbing sub areas (windows, pictures, carpets) can be defined within a wall
- Materials Editor: definition of customized sound absorbing materials
- **Loudspeaker Editor:** customize your loudspeaker model (cabinet styles : blocks with slanted walls), *1-5 ways loudspeakers, act./pass. subwoofers, or dipole radiating flat panels. Using the **updated (Rel. 2.2 PLUS) editor** (see **Download / Patches**) also sophisticated cabinets (e.g. composed of several cabinet sections, like a dipole hybrid LS) may be designed.*
- Loudspeaker Configurations: Stereo, Quadro, Surround (analogue, digital: 5.1, *6.1, 7.1, 8.1*), PA (Public Address)
- loudspeaker database with approx. 200 proprietary speaker models, new models can be **"downloaded"** from the internet
- Positional Optimization: *L-, T-, or cross shaped positioning regions*
- walking around in your 3D room model

Calculations:

- automatic positional optimization for the loudspeakers and the listening place, *with symmetry constraint options (equal spacing to front and side walls)*
- room sound field calculations at 1000-3000 grid points equally distributed within a certain layer above the floor
- *reduction of calculating times for rectangular rooms (without furniture) in comparison to the latest version by a factor of up to 1000*
- calculation with real and complex reflection coefficients (optionally)
- *The additional "PLUS Functions":*
    - *Calculation and evaluation of the "Acoustic Ambiance" (reverberation time spectrum)*
    - *Calculation of the high resolution transient room response as a basis for the "Auralization" (listening test)*

Presentation of Results:

- representation of the optimized positioning of the loudspeakers and the listening place
- listing of a survey of the room acoustics reference numbers: sound coloration, location, speech intelligibility, reverberation time and lateral sound level
- 3D representation of the frequency and time dependence of the modal structure of the sound pressure in the room
- 3D representation the temporal propagation of the sound wave fronts in the room
- 3D sound coloration, location and speech intelligibility maps of your sound room
- 2D-XY diagrams: sound pressure level frequency responses, location diagram, reverberation diagram, frequency dependence of the mean sound absorption coefficient and of the reverberation time (Sabine, Eyring, Kuttruff and CARA-T10) of your room
- *The additional "PLUS Functions":*
  - *"Acoustic Ambiance" including suggestions for linearizing the reverberation time spectrum by insertion of additional materials or furniture (already during room design)*
  - *"Auralization": listening tests e.g. for the comparison of different loudspeaker positionings*

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"to" is a very common word and was not included in your search. [details]

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Sounds of New York, evidence for a preferred ear, ultrasound for ...
... as cultural stereotypes would **suggest** (4aPP1). ... acousticians are turning to
"**auralization**," or virtual acoustics, in which **computer simulations**, based on ...
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File Format: PDF/Adobe Acrobat - View as HTML
... Dodge wrote a piece of **computer** music entitled ... used as a basis for **auralization**
(Sonnenwald, Haberman ... Sonnenwald's work was concerned with **simulation** and
the ...
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[PDF] PROGRAM OF The First Pan-American Õ Iberian Meeting on Acoustics ...
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... These will be compared to a **computer** model, which ... sounds are played over a five-
channel **auralization** system ... These findings **suggest** that some degrees of hearing ...
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File Format: PDF/Adobe Acrobat - View as HTML
... Room Acoustic **Simulation** . ... Experts Group NASA National Aeronautics and Space
Administration PC Personal **Computer** SPSS Statistical ... PHYSICALLY-BASED
AURALIZATION ...
lib.hut.fi/Diss/2002/isbn9512261588/isbn9512261588.pdf - Similar pages

[PDF] Application-driven design of **auralization** systems
File Format: PDF/Adobe Acrobat - View as HTML
... of the optimum acoustical conditions for speech using **auralization**. ... **Computer** models
of the same churches were made using acoustic **simulation** soft- ware. ...
www.msu.edu/user/zhangx11/Publication/Earedness.pdf - Similar pages

AES Preprints: AES 115th Convention
... off-the-shelf **computer** based **simulation** programs can ... is a heavy emphasis on
"**auralization**," or the ... structures' sound characteristics using **computer** modeling ...
www.aes.org/publications/preprints/lists/115.cfm - 101k - Cached - Similar pages

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File Format: PDF/Adobe Acrobat - View as HTML
... In particular, such time delays, which are due to data transport and **computer** processing
from head-motion ... **Simulation** results **suggest** that SVS use might ...
www.as.nasa.gov/hf_symposium/Abstracts.pdf - Similar pages

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... These preliminary results may pave the way for next numerical **simulations** for the ...
human expertise in the decision loop, and is very **computer** time consuming ...
www.isma-isaac.be/past_conf/ isma2004/download/BookOfAbstracts.pdf - Similar pages

[PDF] Annual Report 2001 Ørsted . DTU TECHNICAL UNIVERSITY OF DENMARK
File Format: PDF/Adobe Acrobat - View as HTML
... As these names **suggest**, several of the sections ... The use of **computer simulations**
allows the user to ... is a binaural technique called "**auralization**", and it ...
www.oersted.dtu.dk/PR/annual_reports/annual2001.pdf - Similar pages

RADS2004 ABSTRACT
... on the results of those **computer simulations**, if major ... that is used in a given
auralization. ... Numerical **simulation** demonstrates comparison between the values in ...
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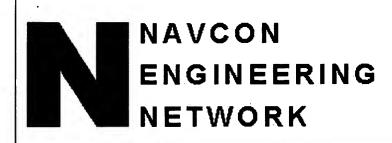Free! Google Desktop Search: Search your own computer.

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SoundPLAN - Software Modules

Software Solutions

SoundPLAN is modular, which means that the software can customized to meet the appli
needs of the user. Modules can be added as needed.

A typical software package for Industrial Noise Application includes:

Modules

1. Geographical Database
2. Industry Noise Propagation
3. Grid Noise Map
4. DXF Import/Export

Additional Module Options:

1. Indoor Factory Noise
2. Cross Sectional Map
3. Cartography
4. Expert System
5. Wall Design

A typical software package for OSHA Application includes:

Modules

1. Geographical Database
2. Indoor Factory Noise
3. Grid Noise Map
4. Cartography

Additional Module Options:

1. Industry Noise Propagation
2. Expert System
3. DXF Import/Export

A typical software package for Road or Railroad Noise Application includ

Modules

1. Geographical Database
2. Road or/and Railroad Noise Propagation
3. Grid Noise Map
4. Wall Design
5. DXF Import/Export

Additional Module Options:

1. Cross Sectional Map
2. Cartography
3. Facade Noise Map
4. Dimensioning of Sound Isolation of V
5. Expert System